

CLAIMS

1. A method for enabling improved handover of a user equipment (3) communicating in a first radio access network (1) utilizing a first radio access technology (RAT), said method comprising the steps of measuring, at said user equipment (3), a first parameter for a plurality of neighboring cells (20) of at least a second radio access network (2) utilizing WCDMA, reporting said first parameter to a node (10) in said first network (1) and initiating handover to one of said plurality of cells (20) in said second network (2) based on said reported first parameter **characterized by** the further steps of:

measuring (S1) at least a second parameter for said plurality of cells (20) of said second network (2),

reporting (S2) said second measured parameters to said node (10) in said first network (1), and

initiating (S3) handover to one of said plurality of cells (20) in said second network (2) based on both of said first and second measured parameters.

2. The method according to claim 1, **characterized in that** said first radio access network (1) comprises one of GSM, WLAN and CDMA2000.

3. The method according to claim 2, **characterized in that** said node (10) is a base station controller (10) in a GSM radio access network (1).

4. The method according to claim 1, **characterized by** reporting said first and second parameters simultaneously.

5. The method according to claim 4, **characterized by** reporting said first parameter according to one of a limited range of values, and reporting said second parameters in the same field using a limited value range, whereby each first parameter value is reported together with one of a plurality of possible limited value ranges.

6. The method according to claim 5, **characterized by** reporting said first parameter according to one of the ranges -14 dB or lower, -13 dB, -12 dB, -10 dB, -9 dB, -8 dB, -7 dB or lower, and reporting said second parameter according to one of the ranges -110 dBm or lower, -105 dBm, -100 dBm, -95 dBm, -90 dBm, -85 dBm, -80 dBm, -75 dBm or higher.

7. The method according to claim 1, **characterized by** reporting said first and second parameters alternately.

8. The method according to claim 1, **characterized by** said first parameter comprising information regarding the quality of the received signal at the user equipment.

9. The method according to claim 8, **characterized by** said first parameter representing the chip energy divided by noise, E_c/N_0 .

10. The method according to claim 1, **characterized by** said second parameter comprising information regarding the signal strength of the received signal at the user equipment.

11. The method according to claim 10, **characterized by** said second parameter representing the Received Signal Code Power (RSCP).

12. The method according to claim 1, **characterized by** initiating handover to said second network (2) based on optimizing a predetermined function depending on said first and second parameter.

13. The method according to claim 1, **characterized by** initiating handover to a cell (20) of said plurality of cells in said second network (2) with the highest values on both said first and second parameters.

14. A user equipment (3) adapted for communicating with a first radio access network (1) utilizing a first radio access technology or a second radio access network (2) utilizing WCDMA, said user equipment (3) performing measurements of at least one cell in the second network (2) in order to determine a suitable handover cell while communicating over said first radio access network (1), said user equipment (3) comprising means for measuring a first parameter and means for reporting said parameter to the first radio network, said user equipment is **characterized by** further comprising:

means (31) for measuring a second parameter, and
means (32) for reporting both said measured first and second parameters to a node in said first radio access network.

15. The user equipment according to claim 14, **characterized in that** said reporting means (32) are arranged to report both measured parameters at the same time.

16. The user equipment according to claim 14, **characterized in that** said reporting means (32) are arranged to alternately report said first and second measured parameters.

17. The user equipment according to claim 14, **characterized by** said first parameter comprising information regarding the quality of the received signal at the user equipment (3).

18. The user equipment according to claim 14, **characterized by** said second parameter comprising information regarding the signal strength of received signals at the user equipment (3).

19. The user equipment according to any of claims 14-18, **characterized in that** said first parameter is the E_c/N_o , and said second parameter is the RSCP.

20. A network node (4) in a first radio access network (1), utilizing a first radio access technology, capable of communicating with a user equipment (3) and receiving measurements of neighboring cells (20) of a second radio access network (2) utilizing WCDMA from the user equipment, **characterized by**

means for receiving (40) measured first and second parameters of the second radio access network (2) from the user equipment (3),

means for selecting (41) a target cell of said neighboring cells (20) of said second network (2) for handover based on said received first and second parameters.

21. The network node according to claim 20, **characterized in that** said selecting means (41) are arranged to select a target cell (20) for handover based on simultaneously received first and second parameters.

22. The network node according to claim 21, **characterized in that** said selecting means (41) are arranged to select a target cell (20) for handover based on alternately received first and second parameters.

23. The network node according to claim 20, **characterized in that** said first parameter comprises information regarding the quality of received signals at the user equipment (3).

24. The user equipment according to claim 20, **characterized by** said second parameter comprising information regarding the signal strength of received signals at the user equipment (3).

25. The network node according to any of claims 20-24, **characterized in that** said received first and second parameters are the Received Signal Code Power (RSCP) and/or the chip energy divided by noise, E_c/N_o .

26. The network node according to any of claims 20-23, **characterized in that** said node comprises a base station controller.
